The Influence of the Logistics System on Supply Support

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Introduction: The influence of the logistics system on supply support

General Al Gray believed intelligence drives operations. Marine logisticians believe logistics provides operational parameters. MCDP 4 supports the above by stating, "Logistics establishes limits on what is operationally possible."[1] Logistics focuses on the provision and utilization of capital and resources, which translates into combat power. Combat power is an important vantage of warfighting, thus logistics and combat service support, the activity of providing logistics, also drives operations. Moreover, logistic processes such as acquisition, distribution, sustainment, and disposition enable logistic activities to be conducted.[2] One of these activities is supply support, which is the function of requisitioning, processing, monitoring, distributing, receipting, and issuing the demand for materiel. "Although the flow of supply support is normally considered to end with issue of required materiel to the user, whatever supply support is required to satisfy the user's requirements must continue."[3] Also, supply support has the greatest potential impact on

[1]MCDP4, *Logistics* (1997), 6.
[2]MCDP 4, 47.
[3]MCO P4400.150E, *Consumer-Level Supply Policy Manual*, (June 1999), 1-3.

MAGTF commander's ability to integrate essential elements of firepower, mobility, and sustainability. Sustainment and enhancement of the relative combat power of the MAGTF is the objective of supply support.[4] In order to perform supply support, a military organization must have a logistics system. A logistics system is tailored in size, structure, and procedure in support of the mission. Furthermore, it is comprised of personnel, facilities, equipment, training, and education. Fundamentally, all logistics systems have two elements: a distribution system, made up of bases and distribution procedures and command and control.[5] Supported by several sources, including anecdotal accounts and lessons learned from Operation Iraqi Freedom (OIF), the effectiveness and efficiency of supply support are directly influenced by the advancement of theater distribution and command and control (C^2) architecture, or the logistics system.

Distribution resources, procedures, and methods

"Distribution is the means by which logistics support-materiel, support services, and personnel-get to the operational commander."[6] The logistic process not only

[4]Maj Jakovich, *Supply and Maintenance Operations*, (December 2002) Slide #9.
[5]MCDP 4, 52.
[6]MCDP 4, 45
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pertains to transportation means, but also the resource and method serving as the infrastructure of the distribution system. The resource and method are commonly referred to as base and distribution procedures, respectively. The key factor in a distribution system is time-the time to process from resource to issue to the supported unit.

Bases are locations containing facilities, equipment, and personnel. They serve as a point where goods and services transfer from one means of transport to another. Bases can include several configurations such as prepositioning, seabasing, forward bases, and permanent institutions. The combination of several base types is usually necessary because of the expeditionary nature and the MAGTF concept of the Marine Corps.[7] Several factors determine base options, such as mission, security, and tempo. For example, forward basing and seabasing may be more suitable for expeditionary operations, while permanent bases promote protection and security in deep rear area operations. After conducting a risk versus gain analysis, commanders view tempo as a critical factor-especially in Iraqi Freedom. Prepositioned maritime shipping facilitated expedient offload of equipment and supplies while highly trained logisticians throughput the materiel to forward

bases and further advanced it to designated supply points.

The means of employing logistics from bases to the supported unit is procedures. If a unit requests a good or service from the base, the "pull" procedure satisfies the request. The system is dependent on the support unit's demand, generating a request. Conversely, resources delivered to the supported unit without request, but according to calculation, planned schedules, and requirements, are "push" procedures. Most logistics functions can be satisfied by "push" procedures because push logistics have been predetermined and calculated. Instead of burdening commanders to request support and project logistic requirements, "push" logistics dependable support.

Arguably, the "pull" procedure is efficient and the "push" procedure is effective, which adds to the dilemma of the commander relying on solely one procedure. "Marine logistics traditionally employs a combination of both methods."[8] Support such as food, water, fuel, and ammunition is a staple for force sustainment. Supported units routinely use these resources based on unit behavior and consumption rates. Medical supplies and repair parts are on

[7]MCDP 4, 54.
[8]MCDP 4, 65.

an as-required basis and are distributed using the "pull" procedure. The responsibility is on the supported unit, the requesting unit.

There are two distribution methods used to deliver resources to the supported unit: supply point distribution and unit distribution. Supply point distribution involves resources staged at a base or supply point requiring the supported unit to the point for receipt. On the other hand, unit distribution requires the resource be delivered to the supported unit. Once again, supply point distribution serves efficiently while unit distribution served effectively. In Marine Corps practice, both methods are used together in the delivery of resources.[9]

Operation Iraqi Freedom (OIF): Distribution

In Operation Iraqi Freedom, both "push" and "pull" procedure and supply point and unit distributions were utilized in concert because of the expeditionary nature of operations. Flexibility was paramount. The extended distances and tempo of maneuver elements influenced push logistics for sustainment of water, food, fuel, and ammunition. These resources were not demand generated. The support was predictable because of the nature of operations. The support was pushed and staged at supply

points arrayed along the battlespace. Like a service station, the supported unit came to the supply point and received resources; it was highly effective. The resources had dedicated means for delivery because of their standardization. All faculties, including personnel, equipment, and supplies, were constant. During combat operations, "push" resources received higher priorities because they were the only resource necessary at the time. Therefore, every distribution means was exhausted via motor transportation, assault support, and air delivery. Unfortunately, once combat power required maintenance and battlefield casualties increased, the demand for "pull" support circulated. The brevity of transition had an adverse effect upon delivery means because the personnel and equipment were limited and already employed with "push" resources that were ongoing. During operations, "push" and "pull" resources competed for distribution and this hindered logistic tempo and sustainment. Pure "push" convoys and shipments were unable to tailor with "pull" resources such as repair parts and medical supplies. Once the transition from combat operations to stabilization operation occurred, demand generated logistics' deficiencies accumulated and its effects on combat power

[9]MCDP 4, 67.

proved damaging.

Recommendation and new concepts

To counteract these instances, one agency should govern distribution means, procedures, and methods. Having dedicated distribution assets for "push" resources is understandable for initial and routine sustainment, however, "pull" resources should have prescribed lift when necessary. Ultimately, convoys and shipments should be tailored across the spectrum of goods and services, both push and demand-pull resources.

Concepts such as seabasing propose naval intermodal packaging delivered directly to supported units without dedicated MHE and line haul capabilities. The seabasing tenet focuses on a distribution system with tailored loadouts. Loads are also prescribed; they must be small enough to be carried organically by the support unit and large enough to support any adjustments or delays in the resupply cycle. Routine resupply cycles will be twenty-four hours, however the length of the cycles and the on hand stockage levels may be adjusted to fit the operational situation.[10]

[10]Nicholas Linkowitz, "Future MAGTF Logistics and Support From The Sea (2010+)," *Marine Corps Gazette* (August 2003): 25.
[11]MCDP 4, 68.

Distribution's reliance on command and control

"The best distribution system in the world is useless without an effective means for using that system to take necessary actions. Command and control is fundamental to all military activities."[11] Command and control is the link between logistics and operations. Furthermore, command and control aids the commander about what support is required and ensures that support is given to the unit that needs it. Overall, logistics command and control helps in the allocation of resources, anticipation of future logistic requirements, and the mitigation of uncertainty.[12]

Command and control in Operation Iraqi Freedom

In OIF, supply support was extremely challenging because of the combat environment and its uncertainty. Distribution of "brute force" logistics was laborious, but demand-pull logistics, specifically repair part and medical supplies, was unsatisfactory. The command and control system governing and processing demands was a thirty-year-old mainframe bases system called the Asset Tracking Logistic and Supply System (ATLASS). The legacy supply support system was inadequate. Moreover, two incompatible supply systems were utilized in theater, which created

[12]MCDP 4, 68.

interface problems and manual processes work arounds. Additionally, an inventory system was tested in this austere environment and spawned more time toward analyzing the system's failures instead of meeting the end state of its mission.[13] As a result, supported units had little or no visibility on demand pull resources for items passed through different systems. "The Marine Corps must never again deploy forces to combat with two systems that cannot effectively communicate between each other and thus provide the commanders the ability to view status of requested parts and project readiness status."[14]

Intransit visibility (ITV) was non-existent on the Iraqi battlefield. Once a resource became an item on a convoy or shipment, the two ATLASS systems reflected inaccurate and invalid status. While many convoys were on the roads, their contents and locations were unknown. Therefore, the distribution of supplies was unknown until arrival. No ITV and low priority of demand-based requisitions in the distribution order further irritated the problem. Distance and operation tempo exacerbated the issue and supported and supporting units lost faith in the

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[13] LtCol John J. Broadmeadow, "Logistics Support to 1st Marine Division During Operation Iraqi Freedom," *Marine Corps Gazette* (August 2003): 45.

[14] Col Matthew W. Blackledge, "Professionals Talk Logistics," *Marine Corps Gazette* (August 2003): 42.

supply system.[15] Bypassing the supply system became routine. Incomplete worksheets without applicable information, duplicated rapid requests, and misguided, lengthy email, plagued the demand circuit. Without format and discipline, supporting units spent significant time deciphering the request types instead of fixing the current supply system. Therefore, all demands originated as high priority, which meant there was no inherent way of determining what was important or critical.

C^2 innovation

The training and education process of logistics integration of people processes, and technologies, implemented new information technology called the Global Combat Support System- Marine Corps (GCSS-MC). The system is a collaborative logistics IT suite with a vibrant architecture that is interoperable, tailorable, and joint. Basically, "GCSS-MC provides us with the desperately needed technical enabler."[16] According to an Expeditionary Maneuver Warfare pamphlet, an infrastructure of distribution systems to support expeditionary operations needs to be accessible

[15] Commanders and Staff of 1st FSSG, "Brute Force Combat Service Support: 1st Force Service Support Group in Operation Iraqi Freedom," *Marine Corps Gazette* (August 2003), 38.
[16] LtGen Richard L. Kelly, "Excellence in Logistics Supporting Excellence in Warfighting," *Marine Corps Gazette* (August 2003): 14.
[17] *Expeditionary Maneuver Warfare* (February 2002), A-9.

to Marines.[17] Under the seabasing concept, logistics information from a common relevant operating picture and naval distribution will throughput logistics and prevent dis-connectivity. This IT will align with the programs embedded in the private and public sectors. The system will be incorporated Marine Corps-wide. It will be web-based, customer-friendly, responsive, and acquisition capable. Finally, GCSS-MC every Marine Corps legacy application will pass through a single portal to interface forming a common language and picture. This development will fill the gap on logistic command and control architecture and improve the supply support system exponentially.

Conclusion

The advancement of theater distribution and command and control architecture will improve the effectiveness and efficiency of supply support.

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